

APPENDIX

(37 C.F.R. §1.192(c)(9))

1. A method for acquiring digital x-ray images, said method comprising:
 - identifying scan parameters designating slices of interest from a patient anatomy;
 - calculating scan ranges for each of said slices, said scan images corresponding to distances traveled by each of a detector and x-ray tube while said x-ray tube exposes said detector to radiation;
 - calculating first and second preparation positions for each of said x-ray tube and detector, said first and second preparation positions being located at opposite ends of said scan ranges and corresponding to a distance traveled by said x-ray tube and detector, said x-ray tube not exposing said detector to x-rays while moving through said preparation positions;
 - moving said detector and x-ray tube to said first detector and x-ray tube preparation positions, respectively;
 - acquiring a first x-ray image with said detector while moving said detector in a first direction over a first detector scan range and moving said x-ray tube in a second direction over a first tube scan range, said second direction differing from said first direction, said first x-ray image being acquired based on said scan parameters;
 - moving said detector and x-ray tube to said second detector and x-ray tube preparation positions, respectively;
 - positioning said detector and x-ray tube at said second detector and x-ray tube preparation positions, respectively, after said acquiring a first x-ray image step; and

acquiring a second x-ray image with said detector while moving said detector in said second direction over a second detector scan range and moving said x-ray tube in said first direction over a second tube scan range, said second x-ray image being acquired based on said scan parameters.

2. The method of claim 1, wherein the scan parameters include at least one of: a focal plane of interest; a sweep angle; a focal plane thickness; and an exposure time.

5. The method of claim 1, further comprising calculating detector and x-ray tube travel distances and sweep velocities for each of said first and second detector and tube scan ranges based on said scan parameters.

6. The method of claim 1, further comprising:
displaying said first x-ray image on a monitor before completing said step of acquiring said second x-ray image; and
after acquiring said second x-ray image, displaying said first and second x-ray images simultaneously on the monitor in a multi-image format.

7. The method of claim 1, further comprising:
saving said first x-ray image in an image storage device; and
displaying said first x-ray image on a monitor in a multi-image format display before completing said step of acquiring said step of acquiring said second x-ray image.

9. The method of claim 1, further comprising modifying said scan parameters before scanning a next x-ray image.

10. A method for displaying digital x-ray images in a multi-image format, said method comprising:

identifying scan parameters designating multiple slices of interest from a patient anatomy;

acquiring a series of images with a digital x-ray detector, each image in said series of images corresponding to a slice of interest;

displaying images simultaneously as each image in said series of images is acquired; and

after acquisition and simultaneous display of said each image in said series of images, halting said acquiring step until reinitiated by an operator.

11. The method of claim 10, wherein said identifying step designates all scan parameters needed for acquisition of said series of images before beginning said acquiring step.

12. The method of claim 10, further comprising after each acquisition, prompting the operator to change previously identified scan parameters designating said slice of interest not yet acquired.

13. The method of claim 10, further comprising redefining previously identified scan parameters designating said slice of interest not yet acquired after each acquisition.

14. The method of claim 10, wherein the scan parameters include at least one of: a focal plane of interest; a sweep angle; a focal plane thickness; and an exposure time.

15. The method of claim 10, wherein the acquiring step further comprises:
scanning a patient in a first direction to acquire a first image; and
scanning said patient in a direction opposite to said first direction to acquire a second image, said second image being acquired subsequent to said first image.

16. The method of claim 10, wherein the acquiring step further comprises calculating first and second preparation positions located on opposite ends of a scan range over which said series of images of the patient are acquired.

17. The method of claim 10, further comprising loading precalculated stored detector and x-ray tube velocity and travel distances before each acquisition.

18. The method of claim 10, further comprising loading a preparation position after each said acquisition, wherein said preparation position is located at the opposite end of a scan range as a location of a previous preparation position.

19. The method of claim 10, wherein said images are acquired utilizing a servo-tomo function.

20. The method of claim 10, further comprising calculating detector and x-ray tube travel distances and sweep velocities based on said scan parameters.

21. The method of claim 10, further comprising calculating x-ray tube angulation based on said scan parameters and said x-ray tube travel distance.

23. The method of claim 1, said calculating step further comprising:
loading stored x-ray tube angulation data and detector and x-ray tube velocity and travel distances corresponding to a subsequent x-ray image while moving said x-ray tube through said second preparation position.